

112050



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Agency for Toxic Substances
and Disease Registry

Memorandum

Date April 16, 1993

From Chief, Exposure and Disease Registry Branch

Subject To Keep you up-to-date with the TCE Subregistry

To ATSDR Regional Offices

Enclosed is the registrant information packet which was mailed to the TCE subregistry members on April 15. The packet includes a cover letter (slightly different for each location, an example letter is enclosed), a fact sheet which summarizes the results on a single page, and the Registrant Report. The information summarizes the results of the baseline data analysis which is described in detail in the technical report. You should receive copies of the technical Report in the near future.

In March, a draft registrant report was reviewed by representatives from each of the states included in the baseline analysis, and also by a group of registrants in Rockford, Illinois. Comments from the state and local officials, and the registrant group were incorporated in the final version.

Public meetings will be held at the end of this month and the first week in May at each of the site locations.

Enclosures

RECEIVED

APR 19 1993

ATSDR
REGION III
AR100373



Agency for Toxic Substances
and Disease Registry
Atlanta GA 30333

April 16, 1993

Dear Registrant:

Enclosed is the first report to the participants on the TCE Subregistry. This report, *The TCE Subregistry Baseline Registrant Report*, is a summary of the analysis of the baseline interview data. The Registrant Report is being mailed to all members of the TCE Subregistry.

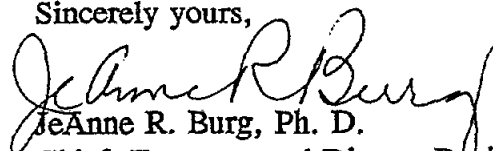
Registrants reported a greater number of health problems compared with a national survey of the general U.S. population. It should be noted that this registry data can not be used to determine if TCE "causes" health problems. The increased reporting of some health problems may be related to many factors, such as TCE exposure, exposure to other chemicals at work or home, tobacco use, drinking alcohol, and other health conditions might have contributed to the reporting of these health conditions. The Agency for Toxic Substances and Disease Registry (ATSDR) will be contacting some registrants to obtain more information and possibly medical records for a more in-depth evaluation of certain health outcomes.

Also, there are some technical issues that might have contributed to the health findings and must be considered when interpreting the TCE Subregistry baseline data. The information on the TCE questionnaire was compared to a national survey conducted annually by the National Center for Health Statistics of the Centers for Disease Control and Prevention. For four of the health conditions reported more often (anemia, skin rashes, urinary disorders, and heart conditions), the questions were not exact matches for the TCE questionnaire and the national survey; the others (speech impairment, hearing impairment, hypertension, stroke, diabetes, and kidney disease) were exact or very close matches. That the registrants might have sought medical care more often and that the exposure data are incomplete might also have caused a difference in the results obtained.

This report covers only the information collected in the first interview with the registrants. ATSDR will continue to study the possible association of TCE exposure and health effects as we collect more information. The additional information that will be collected from registrants and the on-going follow-up efforts will allow ATSDR to better evaluate the presence or absence of an association.

ATSDR invites you to come to a public meeting to discuss the Registrant Report. The meeting will be held April 27, 1993, from 7:00 to 9:00 p.m. at the Ken-Rock Community Center, 3218 11th Street, Rockford. A copy of *The TCE Subregistry Baseline Technical Report*, which is a more complete report of the baseline data analysis will be available for your review at the Ken-Rock Community Center. We hope to see you there.

Sincerely yours,



JeAnne R. Burg, Ph. D.

Chief, Exposure and Disease Registries Branch
Division of Health Studies

AR100374

ATSDR

Agency for Toxic Substances and Disease Registry

FACT SHEET

Trichloroethylene (TCE) Subregistry Report

What is the registrant report?

This is the first report on the health of the people who are members of the TCE subregistry. This report summarizes the *TCE Baseline Technical Report*, which gives the details about the survey methods and results from the first interview with registrants.

For this report, ATSDR compared the health conditions reported by registrants with health conditions reported in a nationwide survey of the general population. We found that registrants reported some health conditions at a higher rate than would have been expected. Some of the health conditions showed higher rates for certain age groups. Others had higher rates only for men or only for women. Cancer rates were not higher compared with the general population. Some of the health conditions with higher rates are:

Anemia and Other Blood Disorders

Diabetes	Hearing Impairment
Heart Condition	High Blood Pressure
Skin Rashes	Speech Impairment
Stroke	Urinary Disorders

What does this mean?

At this time, ATSDR does not know the reason for these higher rates. There are several possible reasons for the higher rates, such as exposure to TCE in the home, other chemical exposures at work or home, personal lifestyle choices like

smoking or drinking alcohol, or complications related to other health conditions. More detailed information is needed on several of these reported health conditions to evaluate these reasons. ATSDR will continue to look at information provided in update interviews and tell registrants about these results in future reports.

What happens now?

ATSDR will ask for more information from registrants who reported these health conditions. ATSDR will also continue to call all registrants to keep the TCE subregistry up to date, and report the results of the interviews to registrants.

ATSDR does not have enough information about health conditions in the TCE subregistry to make medical recommendations that are different from recommendations for the general public. However, ATSDR will provide the results of this report to area physicians. Registrants who have particular health concerns may wish to contact their personal physician.

Where can I get more information?

Dr. Je Anne Burg
ATSDR

1600 Clifton Road (MS E-31)
Atlanta, Georgia 30333
(404) 639-6202

AR100375

National Exposure Registry
Trichloroethylene (TCE) Subregistry
Baseline Registrant Report
April 13, 1993

The Agency for Toxic Substances and Disease Registry (ATSDR) started the trichloroethylene (TCE) subregistry as part of the National Exposure Registry. The goal of the subregistry is to collect and provide information which will guide ATSDR in exploring whether there may be a link between exposure to TCE and health problems. Information from the first (baseline) interview with subregistry members (registrants) has provided a first step toward this goal. This information has helped in determining what steps should be taken next.

This is the first report about health conditions to the people who are part of the TCE subregistry. This report on the baseline study is a summary of the TCE Baseline Technical Report, which gives the details about the survey methods and results from the first interview (baseline interview) with registrants. The full report is available at locations listed in the cover letter.

Who are the registrants?

Registrants were exposed to TCE through contaminated household water. In the subregistry, there are 4,522 living and 254 deceased registrants. The following is a list of locations and the number of addresses at each that are included in the TCE subregistry.

Michigan 121 addresses

Indiana 320 addresses

Illinois 461 addresses

A site in Pennsylvania was added to the TCE subregistry in 1992 and a site in Arizona will be added this year. The interview data from those sites are not included in this report.

The characteristics of the 4,042 living registrants were:

- 52% were females
- 97% were white
- average age was 44 years
- 24% were under 18 years of age
- 70% of registrants aged 25 years and older graduated from high school
- 69% were employed full- or part-time
- 61% were current or ex-smokers

AR100376

What were the results of the baseline survey?

The health conditions that TCE registrants reported in the first interview were compared with the health conditions reported in a nationwide survey of the general population. The results discussed in this report are limited to white registrants because of the small number of people in other racial groups.

Registrants reported higher rates for some health conditions when compared with the rates seen in the national survey. Table 1 shows the health conditions, by sex and age groups, for which there were higher rates reported. Table 1 also displays the number of cases that would have been expected using the national survey rates.

TCE registrants reported higher rates for the following conditions:

Rashes: Higher rates of "skin rashes, eczema, or skin allergies" were reported for both males and females in all age groups.

Speech Impairment: Higher rates were reported for males and females 9 years of age and younger.

Hearing Impairment: Higher rates were reported for both males and females 9 years of age and younger.

High Blood Pressure: Higher rates were reported for both males and females from 18 through 64 years of age.

Stroke: Higher rates of "the effects of a stroke" were reported for both males and females from 35 through 54 years of age and 65 years of age and older.

Anemia and Blood Disorders: Higher rates were reported for males 9 years of age and younger, 35 through 44 years, and 55 years of age and older, and females aged 18 through 24 and 35 through 54 years of age.

Diabetes: Higher rates were reported for females 18 through 24 and 45 through 54 years of age.

Kidney Disease: Higher rates were reported among females from 55 through 64 years of age.

Urinary Tract Disorders: Higher rates were reported among females in 0 through 9, 18 through 44, and 55 and over age groups. Higher rates were seen in males from 18 through 34 years of age.

Heart Problems: Higher rates were reported for males 9 years of age and younger, 10 through 24 years and over 65 years of age. For females, higher rates were reported for age groups less or equal to 9 years, and 45 through 64 years of age.

Higher rates of cancer were not reported among registrants. However, the rates of all health outcomes, including cancer, can change as time passes and therefore, the comparisons with the national rates may also change.

Does TCE in household water affect health?

Registrants reported a greater number of health problems compared with a national survey of the general U.S. population. The registry data can not be used to determine if TCE 'causes' health problems. These increased rates might be related to TCE exposure. However, other factors might have contributed to these health problems. For example, exposure to chemicals at work and lifestyle factors such as smoking cigarettes and drinking alcohol can affect health. Health conditions can be due to other illnesses. For example, a hearing loss can be related to ear infections.

There are also some technical issues that must be considered when interpreting the TCE subregistry data. The wording for some of the TCE subregistry questions did not exactly match the wording of the national survey questions. This may have caused the rates to differ. It is possible that people who know that they have been exposed may be more aware of their health and seek medical services more often than the general public. In addition, there is very little environmental information. At most subregistry addresses, only one sample was available from the wells to document that exposure to TCE occurred. More information is needed to calculate levels of exposure. ATSDR is going to try to get information that will help address these technical points.

Also, to better understand the health conditions seen in this baseline report, ATSDR needs more detailed health information. ATSDR will contact the people who reported certain health conditions and try to determine the exact type of health condition reported and what other factors, if any, might be related to the conditions. As new information is collected from future surveys, the results will be shared with registrants.

What happens now?

ATSDR will contact by telephone those people who reported certain health conditions. They will be asked to provide more information about their health, and might be asked to release their medical records for review. This new information will be reviewed for the subregistry as a whole; a decision will then be made on

what other steps might be needed for health studies. All registrants will be informed of these steps.

ATSDR will begin work to try and get the information needed to answer the technical problems. A project is already underway to better define the exposures of the communities on the TCE subregistry.

This summer, registrants will be contacted to update subregistry files. After the interviews this summer, interviews will take place every 2 years. The same questions will be included in the interviews, but there may be some new questions based on the results of the baseline study. The results of the updates will be shared with registrants.

The letter that was enclosed with this report gives the time and place of a community meeting sponsored by ATSDR. In that meeting, these results will be discussed and any questions registrants may have about the report will be answered. The letter also describes where the full TCE Baseline Technical Report can be obtained.

What should the registrants do?

If registrants have any concerns about their health, they should consult their personal doctors or other health care providers. ATSDR also plans to give the health care providers in the area a copy of this report and additional medical information.

For information on this report or the TCE Baseline Technical Report, please contact Dr. Je Anne Burg at (404) 639-6202.

Table 1.—Number of Observed versus Expected Health Conditions

HEALTH CONDITION	SEX	AGE (years)	TOTAL NUMBER OF REGISTRY MEMBERS	NUMBER OF REGISTRY MEMBERS WHO ANSWERED "YES" FOR HEALTH CONDITION (OBSERVED)	NUMBER EXPECTED BASED ON NATIONAL NORMS
Skin Rashes	Male and Female	All Ages	3915	318	248
Speech Impairment	Male	0-9	202	11	5
	Female	0-9	188	6	2
Hearing Impairment	Male	0-9	202	11	5
	Female	0-9	188	5	3
High Blood Pressure	Male	18-24	218	13	3
		25-34	392	38	18
		35-44	318	48	28
		45-54	197	41	33
		55-64	146	52	39
	Female	18-24	235	16	5
		25-34	450	27	15
		35-44	322	45	27
		45-54	192	53	31
		55-64	172	65	48
Stroke	Male	35-44	318	4	1
		45-54	197	2	1
		>65	148	13	9
	Female	35-44	322	5	2
		45-54	192	6	1
		>65	213	20	11
Anemia	Male	0-9	202	5	1
		35-44	318	4	1
		55-64	146	5	1
		>65	148	15	2
	Female	18-24	235	19	9
		35-44	322	16	8
		45-54	192	12	3

Table 1.— Continued

HEALTH CONDITION	SEX	AGE	TOTAL NUMBER OF REGISTRY MEMBERS	NUMBER OF REGISTRY MEMBERS WHO ANSWERED "YES" FOR HEALTH CONDITION (OBSERVED)	NUMBER EXPECTED BASED ON NATIONAL NORMS
Diabetes	Female	18-24	235	5	1
		45-54	192	15	7
Kidney Disease	Female	55-64	172	11	2
Urinary Disorder	Male	18-24	218	4	1
		25-34	392	5	1
	Female	0-9	188	11	1
		18-24	235	21	3
		25-34	450	20	4
		35-44	322	22	4
		55-64	172	11	3
		>65	213	14	5
Heart Condition	Male	0-9	202	13	4
		10-17	254	16	4
		18-24	218	12	4
		>65	148	54	37
	Female	0-9	188	9	4
		45-54	192	27	13
		55-64	172	35	20